Qwest Cloud-Based Services

On-demand access to IT resources

Grow your business with on-demand, scalable applications and cloud-computing infrastructure.

Today's successful businesses often expect their IT resources to help increase profits by improving flexibility and decreasing time to market. But what happens when IT systems can't meet the demands of a growing company's need to scale? Upgrading or adding technology often isn't an option as IT budgets are stretched to the limit. So, how can a business expect to expand, explore and compete without a solid IT infrastructure standing behind it?

More and more IT leaders are turning to outsourced, cloud computing services to fulfill their growing technology needs—and do more with less. Cloud computing is the natural evolution of network-based IT services, offering IP-based access to servers, data storage, networks and application resources. Cloud computing is a dynamic solution that can offer your business the technology support it needs to expand and succeed with:

- Faster time to market—the time and money you save on technology build-out can be reinvested in your core company offerings.
- An on-demand model based on expense not capital, so you pay only for what you use.
- Increased flexibility and ability to scale so you can add or eliminate capacity as needed.
- On-demand business continuity and disaster recovery (BC/DR).

"The market for cloud-based infrastructure services is just beginning to coalesce. Enterprise IT executives show high interest in leveraging the economics, flexibility and agility of these services."

–Ted Ritter, Senior Research Analyst, Nemertes Research

THE BENEFITS OF CLOUD COMPUTING	
On-Demand Scalability	Use all the applications or services you need, when you need them—without purchase or maintenance costs.
Streamlined Data Center	Gain flexibility and efficiency over traditional technology models requiring dedicated hardware for specific applications.
Improved Business Processes	Access to shared applications, information and data streamlines workflows and reduces development costs.
Minimize Startup Costs	Computing technology including servers, hard drives, memory, LAN connections, operating systems, security, load balancing etc., are offered as a complete IT service. Clients are freed from the need to acquire or spend capital to build and maintain their own systems.

Basic Cloud Service Platforms

Public cloud platforms offer service via a Web browser over the Internet. Typically, public cloud services come from a third-party provider who packages resources and essentially "rents" them to customers. Customers pay for use via a metered billing process similar to that of traditional public utilities. Private or internal clouds offer the same services as public clouds, but are usually dedicated to a specific company or user group. A third option, hybrid or virtual private clouds, is now gaining traction. In this scenario, key elements from both public and private clouds are combined using a lower-cost, multi-tenant infrastructure that offers security and high-performance, and which is accessible via public or private IP connections.

Cloud computing is generally considered to encompass three major areas:

INFRASTRUCTURE-AS-A-SERVICE (IAAS) – IaaS providers offer pre-packaged computing platform services that can be rented on a monthly, weekly or even an hourly basis. This means customers can now avoid the capital expense of owned equipment and instead purchase computer resources as needed for specific needs as they change.

PLATFORM-AS-A-SERVICE (PAAS) – An ideal cloud platform for software developers and application owners, PaaS offers similar services as IaaS but includes a development platform such as Java or APEX. This eliminates the need for the customer to interact with the operating system and enables them to simply write and run their application within the Java or APEX platform. PaaS also enables service providers to avoid operating version control issues that could be difficult to manage with a large customer base. It purposely separates the application development environment from specific hardware, providing service providers with the flexibility to choose different hardware options or vendors as needed.

SOFTWARE-AS-A-SERVICE (SAAS) – The SaaS model provides finished applications on an on-demand basis to any end-user through an IP-based network. This reduces the need for resources required to run applications on the end-user's machine. SaaS is delivered over the Internet via the public cloud, although private clouds are beginning to use SaaS as well.

Cloud Computing with Qwest

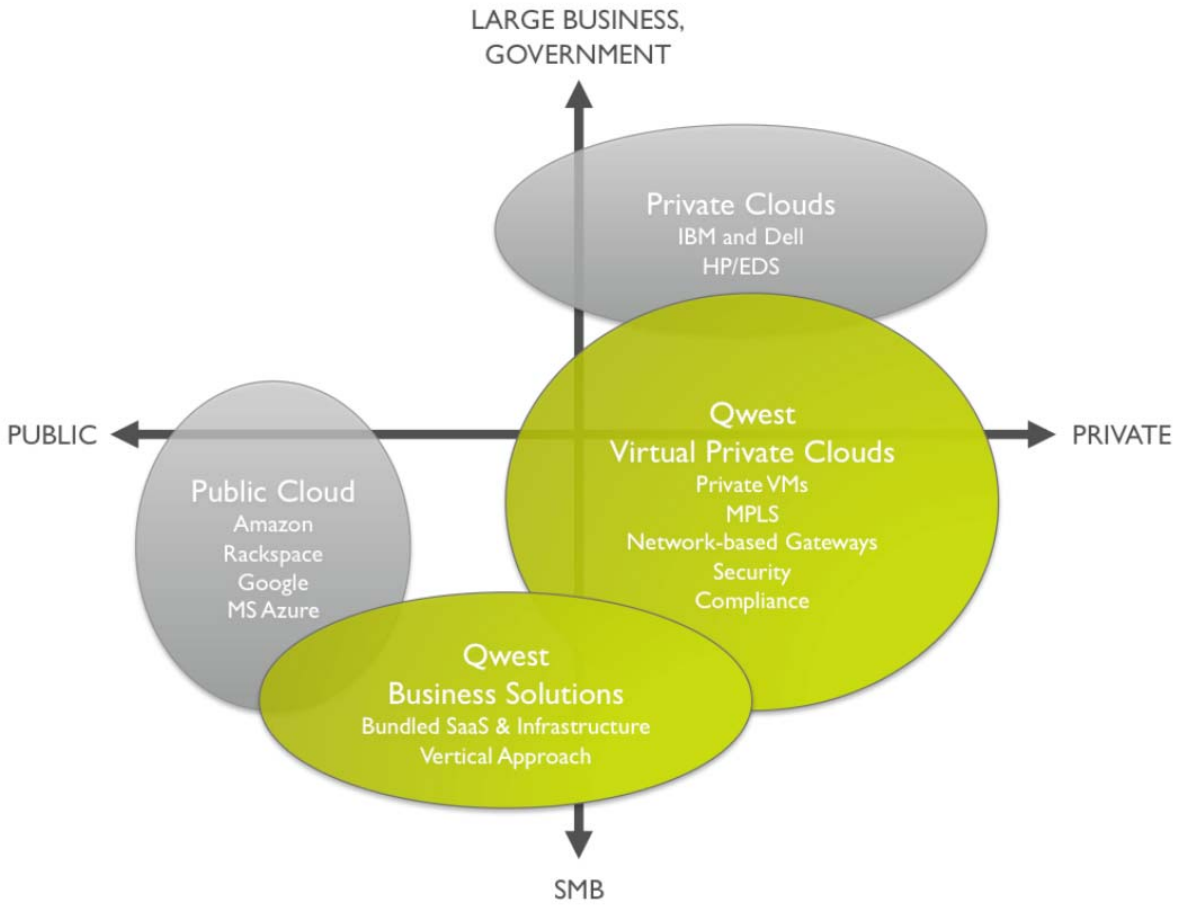
Qwest is leveraging its long history as a network services provider to develop and integrate cloud services and is a solid choice for companies interested in taking advantage of cloud computing. We believe that both public, private and hybrid cloud services have merit, and we are building a portfolio of cloud services to ensure that our customers get the right mix of performance and features. We are also leading development of industry standards for service creation and delivery.

"Unlike the manufacturing supply chain, the cloud-based 'services supply chain' occurs in real-time across distances, combining the best technologies into a single, unified experience. This maximizes core competencies, enables partnerships that enhance your offerings, and combines services in new and interesting ways."

– Pieter Poll, Chief Technology Officer, Qwest Communications

AN INTEGRATED APPROACH

Qwest's network assets, CyberCenters, integration experience and performance management capabilities allow us to provide a strong infrastructure for businesses to scale their cloud needs while meeting budget requirements. Our approach to security creates visibility for customers to use in audit and compliance activities as well as analytics.



QWEST'S CURRENT CLOUD SERVICES

Qwest's existing portfolio includes several cloud-based services and infrastructure elements. Our 17 CyberCenters deliver reliable, high-speed, high-performance networks on which to build cloud services that can benefit businesses of any size.

MAPPING QWEST SOLUTIONS TO MEET YOUR NEEDS

CUSTOMER NEED	QWEST BASIC OPTIONS	QWEST ADVANCED OPTIONS
Web Site Services	Shared Web hosting	Managed hosting
Computing & Infrastructure Management	• Standard collocation • Storage • Network Management Service (NMS) (monitor and notify)	• Private cages, special builds • Business protection (disaster recovery) • NMS (select, comprehensive) • Real-Time Application Recovery™
Collaboration	• Audio and Web conferencing	• Hosted SharePoint • Telepresence
Messaging	• Webmail • Fax over email	• Hosted exchange
Communications	• Managed VoIP • EZ Route • On Demand IVR • Notify	• Hosted unified communications system (HUCS) • Hosted Interactive Voice Response (IVR) • Q Routing®
Security	• Anti-virus/anti-spam • Web defense • Managed Security Service-MSS (firewall)	• MSS (comprehensive) • Distributed Denial of Service (DDoS)

A View to the Future

Qwest plans to deploy additional scalable computer and storage infrastructure within its CyberCenters to create a full suite of IaaS offerings including: storage, on-demand services, business continuity and disaster recovery (BC/DR), business-class VMs and private clouds.

Qwest's business-class IaaS offering will meet the needs of customers looking for a virtualized model to complement or enhance their existing server or storage elements.

Qwest will offer enterprise customers storage, mirrored application environments, or simple processing such as testing or running analytics.

Large enterprise, Fortune 500 and government customers will find that Qwest's public cloud IaaS capabilities will complement and add depth and scalability to any private cloud.

Cloud-based services can transform how companies use technology to meet their most important business goals. Now you have more options than ever when taking advantage of our state-of-the-art technology to build scale and capacity in your business without overspending on IT. Qwest is committed to being a business partner and industry leader in developing both cloud-based services and standards for performance and delivery.

About Qwest Business

Fortune 500 companies choose Qwest Business to deliver a comprehensive portfolio of data and voice networking communications solutions to enterprises, government agencies and educational institutions of all sizes. The Qwest network backbone covers the entire continental United States and has one of the largest fiber footprints in the U.S., capable of supporting 40 Gbps data transmission rates now and 100 Gbps soon. Go to Qwest.com/business to see why enterprises coast-to-coast rely on Qwest for first-class communications solutions and to learn more about Qwest's commitment to perfecting the customer experience.

Availability of Qwest services varies. Please refer to the following for availability details about Qwest Security Services, Qwest iQ® Managed VoIP, Qwest Q Routing®, On Demand IVR, Notify, Hosted IVR, EZ Route, Business Protection Services—Disaster Recovery, Qwest iQ™ Managed Services : qwest.com/legal/docs/availability.pdf